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<b>TRANSMITTAL FORM</b> <i>(to be used for all correspondence during pendency of filed application)</i>		Application Number	10/727,699
		Filing Date	December 3, 2003
		First Named Inventor	Avetik Harutyunyan
		Group Art Unit Number	1754
		Examiner Name	Not Yet Known
Total Number of Pages in This Submission	6*	Attorney Docket Number	23085-07810

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REMARKS: \* Number of pages in this Submission does not include cited references.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Avetik Harutyunyan  
APPLICATION NO.: 10/727,699  
FILING DATE: December 03, 2003  
TITLE: Systems and Methods For Production Of Carbon Nanostructures  
EXAMINER: Not Yet Known  
GROUP ART UNIT: 1754  
ATTY. DKT. NO.: 23085-07810



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**INFORMATION DISCLOSURE STATEMENT**  
**Under 37 CFR §§ 1.56 and 1.97-98**

SIR:

Pursuant to the provisions of 37 CFR §§ 1.56 and 1.97-98, enclosed herewith is modified form PTO/SB/08A listing references for consideration by the Examiner.

The filing of this Information Disclosure Statement shall not be construed as a representation regarding the completeness of the list of references, or that inclusion of a reference in this list is an admission that it is prior art or is pertinent to this application, or that a search has been made, or as an admission that the information listed is, or may be considered to be, material to patentability, or that no other material information exists, and shall not be construed as an admission against interest in any manner.

This Information Disclosure Statement is being filed:

- ☒ within three months of the filing date of the application, or date of entry into the national stage of an international application, or before the mailing date of a first office action on the merits, whichever event last occurred;
- ☐ before the mailing of a first official action after the filing of a request for continued examination (RCE) under 37 CFR § 1.114;

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- ☐ after three months of the filing date of this national application or the date of entry of the national stage in an international application, or after the mailing date of the first official action on the merits, whichever event last occurred, but before the mailing date of the first to occur of either: (1) a final action under 37 CFR §1.113; or (2) an action that otherwise closes prosecution in the application, and:
  - ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR. § 1.97(c); OR
  - ☐ Applicant certifies pursuant to 37 CFR § 1.97(e) that:
    - ☐ each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement; OR
    - ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement;
- ☐ on or before the payment of the issue fee but after the mailing date of the first to occur of either: (1) a final action under 37 CFR § 1.113; (2) a notice of allowance under 37 CFR § 1.311; or (3) an action that otherwise closes prosecution in the application, and:
  - ☐ Applicant certifies pursuant to 37 CFR. § 1.97(e) that:
    - ☐ each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement;
    - ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained

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in this Statement was known to any individual designated under 37 CFR § 1.56(c) more than three months prior to the filing of this Statement; AND

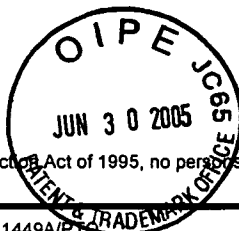
- ☐ attached hereto is the fee set forth under 37 CFR §1.17(p) for submission of this Information Disclosure Statement under 37 CFR. § 1.97(c); OR
- ☐ after the payment of the issue fee. Applicant requests that the information contained in this Information Disclosure Statement be placed in the file according to 37 CFR § 1.97(i), although the information may not be considered by the USPTO.
- ☐ Enclosed is a copy of each listed reference that may be material to the examination of this application, and for which there may be a duty to disclose.
- ☐ This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior application No. \_\_\_\_\_, filed on \_\_\_\_\_, and the references cited therein are hereby referenced, but are not required to be provided in this application under 37 CFR § 1.98(d).
- ☒ This application was filed after June 30, 2003. Therefore, pursuant to the waiver of the requirements under 37 CFR 1.98(a)(2)(i), copies of each U.S. Patent and each U.S. Patent Application Publication are not required to be submitted. Copies of any foreign patent documents and non-patent literature cited herein are enclosed.
- ☐ Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application, and the communication was not received by any individual designated in 37 CFR § 1.56(c) more than thirty days prior to the filing of this Information Disclosure Statement. 37 CFR § 1.704(d).
- ☒ Applicant submits that no fee is required for the consideration of this Information Disclosure Statement.

Consideration of the listed references and favorable action are solicited.

Respectfully submitted,  
AVETIK HARUTYUNYAN

Dated: June 27/2005

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT****Complete if Known**

Application No.	10/727,699
Filing Date	December 3, 2003
First Named Inventor	Avetik Harutyunyan
Art Unit	1754
Examiner Name	Not Yet Known
Attorney Docket Number	23085-07810

Sheet 1 of 2

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document No. Number - Kind Code <sup>2</sup> (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
/EMJ/	A1	US-4,615,649	10-07-1986	Sharpless
/EMJ/	A2	US-5,424,054	06-13-1995	Bethune et al.
/EMJ/	A3	US-5,505,566	04-09-1996	Gruber
/EMJ/	A4	US-5,752,788	05-19-1998	Crum
/EMJ/	A5	US-5,759,230	06-02-1998	Chow et al.
/EMJ/	A6	US-5,816,509	10-06-1998	Ahn et al.
/EMJ/	A7	US-6,436,167	08-20-2002	Chow et al.

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> - Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>6</sup>
/EMJ/	B1	JP 11-246901	09-14-1999	Hitachi Zosen Corporation	X
/EMJ/	B2	JP 2001-254109	09-18-2001	Toda Kogyo Corp	X
/EMJ/	B3	JP H11-293308	10-26-1999	Mitsubishi Materials Corp	X
/EMJ/	B4	JP S53-91054	07-25-1978	Hitachi Maxwell Co., Ltd	
/EMJ/	B5	JP S56-136904	10-16-1981	Toshiba Corporation	
/EMJ/	B6	JP S61-69906	05-13-1986	Nissan Chemical Industries Co., Ltd.	

**OTHER REFERENCES - NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
/EMJ/	C1	AGO, HIROKI et al., "Gas-Phase Synthesis of Single-wall Carbon Nanotubes from Colloidal Solution of Metal Nanoparticles", <i>J. Phys. Chem.</i> , November 1, 2001, Vol. 105, No. 43, pp. 10453-10456	
/EMJ/	C2	BETHUNE, D.S. et al., "Cobalt-Catalysed Growth Of Carbon Nanotubes With Single-Atomic-Layer Walls", <i>Nature</i> , June 17, 1993, Vol. 363, pp. 605-607.	

Examiner Signature	/Edward M. Johnson/ (04/02/2007)	Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609.

Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application No.	10/727,699
				Filing Date	December 3, 2003
				First Named Inventor	Avetik Harutyunyan
				Art Unit	1754
				Examiner Name	Not Yet Known
Sheet	2	of	2	Attorney Docket Number	23085-07810

**OTHER REFERENCES – NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
/EMJ/	C3	CASELL, ALAN M. et al., "Large Scale CVD Synthesis of Single-Walled Carbon Nanotubes", <i>J. Phys. Chem.</i> , 1999, Vol. 103, pp. 6484-6492.	
/EMJ/	C4	CHENG, H.M. et al., "Large-Scale And Low-Cost Synthesis Of Single-Walled Carbon Nanotubes By The Catalytic Pyrolysis Of Hydrocarbons", <i>Applied Physics Letters</i> , Vol. 72, No. 25, pp. 3282-3284. no date	
/EMJ/	C5	CI, LIJIE et al., "Preparation Of Carbon Nanofibers By The Floating Catalyst Method" <i>Carbon</i> , 2000, 38, pp.1933, 1937.	
/EMJ/	C6	IJIMA, SUMIO et al., "Single-Shell Carbon Nanotubes Of 1-Nm Diameter", <i>Nature</i> , June 17, 1993, Vol. 363, pp. 603-605.	
/EMJ/	C7	IVANOV, V. et al. "The Study Of Carbon Nanotubes Produced By Catalytic Method", Elsevier Science B.V., Chemical Physics Letters, Vol. 223, June 24, 1994, pp. 329-335.	
/EMJ/	C8	JOURNET, C. et al., "Large-Scale Production Of Single-Walled Carbon Nanotubes By The Electric-Arc Technique", <i>Nature</i> , Vol. 388, August 21, 1997, pp. 756-758.	
/EMJ/	C9	LI, W.Z. et al., "Large-Scale Synthesis of Aligned Carbon Nanotubes", <i>Science</i> , Vol. 274, December 6, 1996, pp. 1701-1703.	
/EMJ/	C10	NIKOLAEV, PAVEL et al., "Gas-Phase Catalytic Grown Of Single-Walled Carbon Nanotubes From Carbon Monoxide", Elsevier Science B.V., <i>Chemical Physics Letters</i> , Vol. 313, 1999, pp. 91-97.	
/EMJ/	C11	SU, MING et al., "A Scalable CVD Method for the Synthesis of Single-Walled Carbon Nanotubes With High Catalyst Productivity", Elsevier Science B.V., <i>Chemical Physics Letters</i> , Vol. 322, May 26, 2000, pp. 321-326.	
/EMJ/	C12	THESS, ANDREAS et al., "Crystalline Ropes of Metallic Carbon Nanotubes", <i>Science</i> , Vol. 273, July 26, 1996, pp. 483-487.	
/EMJ/	C13	ZHU, W.H. et al., "Direct Synthesis of Long Single-Walled Carbon Nanotube Strands", <i>Science</i> , Vol. 296, May 3, 2002, pp. 884-886.	

Examiner Signature	/Edward M. Johnson/ (04/02/2007)	Date Considered	
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<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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